

FORM PTO - 1449

FIRST SUPPLEMENTAL INFORMATION  
DISCLOSURE STATEMENT

ATTORNEY DOCKET NO.: MIT-075C2

APPLICANT(S): Massie et al.

SERIAL NO.: 10/022,114

FILING DATE: November 16, 2001

GROUP: Not Yet Assigned

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## U.S. PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
RF	A177	5,903,270	05/11/1999	Gentry et al.	345	419	
RF	A178	5,963,212	10/05/1999	Bakalash	345	424	
RF	A179	5,973,678	10/26/1999	Stewart	345	184	
RF	A180	6,064,394	05/16/2000	Morrison	345	582	
RF	A181	6,384,822 B1	05/07/2002	Bilodeau et al.	345	422	10/13/99
RF	A182	6,608,631	08/19/2003	Milliron	345	647	
RF	A183	2003/0117411	06/26/2003	Fujiwara et al.	—	—	

## FOREIGN PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)

## OTHER ART, JOURNAL ARTICLES, ETC.

EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
RF	C32	"3-D Animation Workshop," printed 7/29/03, <a href="http://webreference.com/3d/">http://webreference.com/3d/</a> , Lessons 39, 64-68, and 72; 79 pgs.							
RF	C33	Alejandro, "What is a Tessellation?" <u>The Math Forum, Drexel University</u> , printed 07/29/03, <a href="http://mathforum.org/sum95/suzanne/whattess.html">http://mathforum.org/sum95/suzanne/whattess.html</a> , 4 pgs.							
RF	C34	Altmann, "About Nonuniform Rational B-Splines – NURBS," Worcester Polytechnic Institute, printed 7/29/03, <a href="http://www.cs.wpi.edu/~matt/courses/cs563/talks/nurbs.html">http://www.cs.wpi.edu/~matt/courses/cs563/talks/nurbs.html</a> , 6 pgs							
RF	C35	Arraich, "Quick Mask," <a href="http://www.arraich.com/ref/aatool_quick_mask6.htm">http://www.arraich.com/ref/aatool_quick_mask6.htm</a> , 3 pgs.							
RF	C36	Bentley, "Rendering Cubic Bezier Patches," Worcester Polytechnic Institute, printed 11/17/03, <a href="http://www.cs.wpi.edu/~matt/courses/cs563/talks/surface/bez_surf.html">http://www.cs.wpi.edu/~matt/courses/cs563/talks/surface/bez_surf.html</a> , 10 pgs.							
RF	C37	Birn, "Tutorial: NURBS Head Modeling," printed 07/29/03, <a href="http://www.3drender.com/jbirn/ea/HeadModel.html">http://www.3drender.com/jbirn/ea/HeadModel.html</a> , 5 pgs.							

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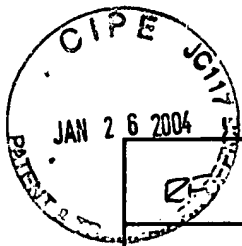
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RF	C38	"Curves," <u>Avid Technology</u> , printed 11/06/03, <a href="http://www.iro.umontreal.ca/~roys/softimage/html/model/curves.html">http://www.iro.umontreal.ca/~roys/softimage/html/model/curves.html</a> , chapter 10, 10 pgs.
RF	C39	Farin, "NURBS," printed 11/17/03, <a href="http://www.eros.caqde.asu.edu/~farin/rbook/toc.html">www.eros.caqde.asu.edu/~farin/rbook/toc.html</a> , 2 pgs.
RF	C40	Feldman, "Texture Mapping," <a href="http://www.geocities.com/SiliconValley/2151/tmap.html">http://www.geocities.com/SiliconValley/2151/tmap.html</a> (22pgs.)
RF	C41	Fisher et al., "Pixel Values," <a href="http://www.dai.ed.ac.uk/HIPR2/value.htm">http://www.dai.ed.ac.uk/HIPR2/value.htm</a> (1 pg.)
RF	C42	Foskey et al, "ArtNova: Touch-Enabled 3D Model Design," Proceedings of IEEE Virtual Reality 2002, March 24-28, 2002, Orlando, Florida pgs. 119-126.
RF	C43	"Fundamentals of NURBS Modeling," <u>Avid Technology</u> , printed 11/06/03, <a href="http://www.iro.umontreal.ca/~roys/softimage/html/model/nurbs_basics.html">http://www.iro.umontreal.ca/~roys/softimage/html/model/nurbs_basics.html</a> , chapter 9, 7 pgs.
RF	C44	Gu et al., "Global Conformal Surface Parameterization," Eurographics Symposium on Geometry Processing (2003), 12 pgs.
RF	C45	"How to use Postscript Art as a Stencil in Photoshop," <u>Swanson Tech Support</u> , Photoshop Techniques 004, 4 pgs.
RF	C46	Komerska et al., "Haptic Interface for Center-of-Workspace Interaction: Demonstration Paper," <u>Haptics Interfaces for Virtual Environments and Teleoperator Systems (2002)</u> , pp. 352-353.
RF	C47	Komerska et al., "Haptic Task Constraints for 3D Interactions," <u>Proceedings, IEEE Haptics Interfaces for Virtual Environments and Teleoperator Systems</u> , (March 22-23, 2003), pp. 27-31.
RF	C48	Lenzmeier, "Color Depth and Color Spaces," <a href="http://www.csbsju.edu/itservices/teaching/c_space/colors.htm">http://www.csbsju.edu/itservices/teaching/c_space/colors.htm</a> (3 pgs.).
RF	C49	"Lesson 12: Blur, Sharpen & Smudge," <a href="http://iit.bloomu.edu/vthc/Photoshop/enhancing/blurring.htm">http://iit.bloomu.edu/vthc/Photoshop/enhancing/blurring.htm</a> , 3 pgs.
RF	C50	"Lesson 14: Selection Tools," <a href="http://iit.bloomu.edu/vthc/Photoshop/BLENDING/selectiontools.htm">http://iit.bloomu.edu/vthc/Photoshop/BLENDING/selectiontools.htm</a> , 7 pgs.
RF	C51	"Lesson 18: Opacity," <a href="http://iit.bloomu.edu/vthc/Photoshop/SpecialEffects/opacity.htm">http://iit.bloomu.edu/vthc/Photoshop/SpecialEffects/opacity.htm</a> , 2 pgs.
RF	C52	"Lesson 22: Vector Shapes," <a href="http://iit.bloomu.edu/vthc/Photoshop/DRAWING/vectorshapes.htm">http://iit.bloomu.edu/vthc/Photoshop/DRAWING/vectorshapes.htm</a> (5 pgs.)
RF	C53	"Lesson 23: Gradients," <a href="http://iit.bloomu.edu/vthc/Photoshop/DRAWING/gradients.htm">http://iit.bloomu.edu/vthc/Photoshop/DRAWING/gradients.htm</a> (7 pgs.)
RF	C54	"Lesson 19: Color Selection," <a href="http://iit.bloomu.edu/vthc/Photoshop/DRAWING/colorpicker.htm">http://iit.bloomu.edu/vthc/Photoshop/DRAWING/colorpicker.htm</a> (4 pgs.)
RF	C55	"Lesson 4: Layers," <a href="http://iit.bloomu.edu/vthc/Photoshop/Basics/layers.htm">http://iit.bloomu.edu/vthc/Photoshop/Basics/layers.htm</a> (2 pgs.)
RF	C56	"Lesson 7: Color Balance," <a href="http://iit.bloomu.edu/vthc/Photoshop/enhancing/colorbalance.htm">http://iit.bloomu.edu/vthc/Photoshop/enhancing/colorbalance.htm</a> (3 pgs.)
RF	C57	"Lesson 8: Brightness & Contrast," <a href="http://iit.bloomu.edu/vthc/Photoshop/enhancing/brightness&amp;contrast.htm">http://iit.bloomu.edu/vthc/Photoshop/enhancing/brightness&amp;contrast.htm</a> (2 pgs.)
RF	C58	Miller et al., "The Design of 3D Haptic Widgets," Proceedings of the 1999 Symposium on Interactive 3D Graphics Conference Proceedings, (1999) pp. 1-6.
RF	C59	Nagel, "A Closer Look: Photoshop's New Paint Engine, Page 2 of 3," March 07, 2002, <a href="http://www.creativemac.com/2002/03_mar/features/ps7dynamics1.htm">http://www.creativemac.com/2002/03_mar/features/ps7dynamics1.htm</a> (6 pgs.).
RF	C60	Nagel, "A Closer Look: Photoshop's New Paint Engine, Page 3 of 3" March 07, 2002, <a href="http://www.creativemac.com/2002/03_mar/features/ps7dynamics1.htm">http://www.creativemac.com/2002/03_mar/features/ps7dynamics1.htm</a> (5 pgs.).
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RF	C61	Nagel, "A Closer Look: Photoshop's New Paint Engine," March 07, 2002, <a href="http://www.creativemac.com/2002/03_mar/features/ps7dynamics1.htm">http://www.creativemac.com/2002/03_mar/features/ps7dynamics1.htm</a> (5 pgs.).
RF	C62	O'Rourke, "Comp.Graphics.Algorithms Frequently Asked Questions, Section 5. 3D Computations," <a href="http://www.exaflop.org/docs/cgafaq/cga5.html">http://www.exaflop.org/docs/cgafaq/cga5.html</a> (13 pgs.).
RF	C63	"Points, Nets, Patches..." printed 11/17/03, <a href="http://www.people.nnov.ru/fractal/splines/nets.htm">http://www.people.nnov.ru/fractal/splines/nets.htm</a> , 2 pgs.
RF	C64	Porter et al., "Compositing Digital Images," Computer Graphics, Vol. 18, Number 3, July 1984, pgs. 253-259.
RF	C65	"Powerful Photoshop Layers: Layer Effects Settings," <a href="http://www.webreference.com/graphics/column32/5.html">http://www.webreference.com/graphics/column32/5.html</a> (5 pgs.).
RF	C66	"Raindrop Geomagic, Inc. product description for "Geomagic Shape," 10/3/03 <a href="http://www.geomagic.com/products/shape">http://www.geomagic.com/products/shape</a> , 2 pgs.
RF	C67	"Raindrop Geomagic, Inc. product description for "Geomagic Shape," 11/26/2003 printout, <a href="http://www.geomagic.com/products/shape">http://www.geomagic.com/products/shape</a> , 2 pgs.
RF	C68	"Raindrop Geomagic, Inc. product description for "Geomagic Studio," <a href="http://www.macdac.com/raindrop/studio.htm">http://www.macdac.com/raindrop/studio.htm</a> (4 pgs.).
RF	C69	Rea, "Digital Photography and Electronic Imaging Glossary," Version 7.5.2 (August 2000), 40 pgs.
RF	C70	Rogers, "An Introduction to NURBS," <u>Morgan Kaufmann Publishers</u> , (2000), pp.1-4.
RF	C71	"Sensable Technologies, "Feature Overview," 11/25/03 printout, <a href="http://www.sensable.com/products/3ddesign/freeform/overview.asp">http://www.sensable.com/products/3ddesign/freeform/overview.asp</a> , 5 pgs.
RF	C72	"Sensable Technologies, "Feature Overview: Emboss with Wrapped Image," 11/25/03 printout, <a href="http://www.sensable.com/products/3ddesign/freeform/emboss_with_wrap.asp">http://www.sensable.com/products/3ddesign/freeform/emboss_with_wrap.asp</a> , 1 pg.
RF	C73	"Sensable Technologies, "Free Form Concept System," 01/20/04 printout, <a href="http://www.sensable.com/products/3ddesign/concept/index.asp">http://www.sensable.com/products/3ddesign/concept/index.asp</a> , 2 pgs.
RF	C74	Sharman, "The Marching Cubes Algorithm," <a href="http://www.exaflop.org/docs/marchcubes/ind.html">http://www.exaflop.org/docs/marchcubes/ind.html</a> (6 pgs.).
RF	C75	Sorkine, et. al, "Bounded-distortion Piecewise Mesh Parameterization," Proceedings of the Conference on Visualization 2002, Boston, Massachusetts, pgs. 355-362.
RF	C76	"Surfaces," <u>Avid Technology</u> , printed 11/06/03, <a href="http://www.iro.umontreal.ca/~roys/softimage/html/model/surfs.html">http://www.iro.umontreal.ca/~roys/softimage/html/model/surfs.html</a> , chapter 11, 22 pgs.
RF	C77	"Tensor Product Spline Surfaces," printed 11/17/03, <a href="http://www.ibiblio.org/e-notes/Splines/Inter.htm">http://www.ibiblio.org/e-notes/Splines/Inter.htm</a> , 3 pgs.
RF	C78	"Touch-Enabled 3D Model Design," Department of Computer Science, University of North Carolina at Chapel Hill (February 2002 ), 2pgs.
RF	C79	Weisstein, "Conformal Mapping," <u>Wolfram Research</u> , printed 11/11/03, <a href="http://mathworld.wolfram.com/ConformalMapping.html">http://mathworld.wolfram.com/ConformalMapping.html</a> , 7 pgs.

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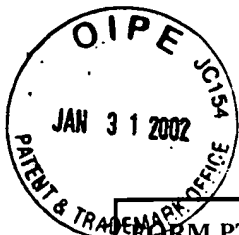
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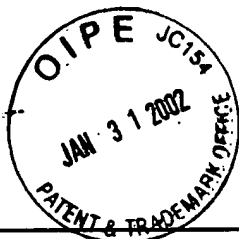
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FORM PTO - 1449				ATTY DOCKET NO.: MIT-075C2			
INFORMATION DISCLOSURE STATEMENT				APPLICANT: Massie et al.			
				SERIAL NO.: 10/022,114			
				FILING DATE: November 16, 2001 GROUP: 2123			
U.S. PATENT DOCUMENTS							
EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
RF	A1	2,475,484	07/49	DeNise	318	628	
RF	A2	2,906,179	09/59	Bower	409	8	
RF	A3	3,133,649	05/64	Serrell	414	2	
RF	A4	3,139,990	07/64	Jelatis et al.	414	2	
RF	A5	3,168,203	02/65	Gallistel	414	5	
RF	A6	3,171,549	03/65	Orloff	414	6	
RF	A7	3,241,687	03/66	Orloff	414	5	
RF	A8	3,263,824	08/66	Jones et al.	414	5	
RF	A9	3,269,826	08/66	Bumgarner.	75	10.65	
RF	A10	3,296,882	01/67	Durand	74	471R	
RF	A11	3,350,956	11/67	Monge	74	471R	
RF	A12	3,409,252	11/68	Miller	244	237	
RF	A13	3,447,766	06/69	Palfreyman	244	236	
RF	A14	3,449,008	06/69	Colechia	294	88	
RF	A15	3,531,868	10/70	Stevenson	33	503	
RF	A16	3,561,263	02/71	Ward et al.	73	862.045	
RF	A17	3,618,786	11/71	Fick	414	5	
RF	A18	3,620,095	11/71	Dane	74	469	
RF	A19	3,637,092	01/72	George et al.	414	5	
RF	A20	3,679,865	07/72	Jesnitzer et al.	219	130.01	
RF	A21	3,771,037	11/73	Bailey, Jr.	318	580	
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EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
RF	A22	3,890,958	06/75	Fister et al.	600	527	
RF	A23	3,920,972	11/75	Corwin, Jr. et al.	700	251	
RF	A24	3,944,798	03/76	Eaton	700	302	
RF	A25	3,948,093	04/76	Folchi et al.	73	862.044	
RF	A26	4,021,715	05/77	Von Hacht et al.	318	628	
RF	A27	4,062,455	12/13/77	Flatau	414	735	
RF	A28	4,150,803	04/79	Fernandez	244	135A	
RF	A29	4,216,467	08/80	Colston	341	20	
RF	A30	4,221,516	09/80	Haaker et al.	414	5	
RF	A31	4,229,136	10/80	Panissidi	414	673	
RF	A32	4,260,319	04/81	Motoda et al.	414	591	
RF	A33	4,302,138	11/81	Zarudiansky	414	5	
RF	A34	4,348,142	09/82	Figour	414	2	
RF	A35	4,367,532	01/83	Crum et al.	700	260	
RF	A36	4,420,808	12/83	Diamond et al.	701	4	
RF	A37	4,459,870	07/84	Gill et al.	74	471xy	
RF	A38	4,477,973	10/84	Davies	33	1CC	
RF	A39	4,510,574	04/85	Guittet et al.	700	260	
RF	A40	4,511,985	04/85	Inaba et al.	700	251	
RF	A41	4,521,685	06/85	Rebman	250	229	
RF	A42	4,531,080	07/85	Nordstrom et al.	318	628	
RF	A43	4,555,960	12/03/85	King	74	471xy	
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<b>U.S. PATENT DOCUMENTS</b>							
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RF	A44	4,571,834	02/86	Fraser et al.	33	1PT	
RF	A45	4,593,470	06/86	Davies	33	1cc	
RF	A46	4,604,016	08/86	Joyce	414	7	
RF	A47	4,632,341	12/86	Repperger et al.	244	230	
RF	A48	4,638,798	01/87	Shelden et al.	606	130	
RF	A49	4,648,782	03/10/87	Kraft	414	735	
RF	A50	4,653,011	03/87	Iwano	700	258	
RF	A51	4,654,648	03/87	Herrington et al.	345	179	
RF	A52	4,655,673	04/87	Hawkes	414	730	
RF	A53	4,661,032	04/87	Arai	700	260	
RF	A54	4,670,851	06/87	Murakami et al.	378	121	
RF	A55	4,676,002	06/87	Slocum	33	1mp	
RF	A56	4,679,331	07/87	Koontz	33	551	
RF	A57	4,680,519	07/87	Chand et al.	318	548.19	
RF	A58	4,703,443	10/87	Moriyasu	702	168	
RF	A59	4,750,487	06/88	Zanetti	606	130	
RF	A60	4,769,763	09/88	Trieb et al.	702	168	
RF	A61	4,787,051	11/88	Olson	345	179	
RF	A62	4,791,934	12/88	Brunnett	600	429	
RF	A63	4,795,296	01/89	Jau	414	5	
RF	A64	4,800,721	01/89	Cemenska et at.	60	393	
RF	A65	4,819,195	04/89	Bell et al.	702	95	
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RF	A66	4,837,734	06/89	Ichikawa et al.	700	249	
RF	A67	4,839,838	06/89	LaBiche et al.	708	141	
RF	A68	4,849,692	07/89	Blood	324	207.26	
RF	A69	4,853,874	08/89	Iwamoto et al.	700	249	
RF	A70	4,879,556	11/89	Duimel	341	20	
RF	A71	4,887,222	12/89	Miyake et al.	700	262	
RF	A72	4,888,538	12/89	Dimitrov et al.	318	675	
RF	A73	4,888,877	12/89	Enderle et al.	33	559	
RF	A74	4,891,889	01/90	Tomelleri	33	503	
RF	A75	4,893,981	01/90	Yoshinada et al.	414	5	
RF	A76	4,895,039	01/23/90	Hegg	74	471x1	
RF	A77	4,907,970	03/90	Meenen, Jr.	434	45	
RF	A78	4,907,973	03/90	Hon	434	262	
RF	A79	4,913,000	04/90	Wyllie	74	523	
RF	A80	4,914,976	04/90	Wyllie	74	523	
RF	A81	4,942,538	07/90	Yuan et al.	700	259	
RF	A82	4,942,545	07/90	Sapia	702	97	
RF	A83	4,945,305	07/90	Blood	324	207.17	
RF	A84	4,945,501	07/90	Bell et al.	702	95	
RF	A85	4,961,138	10/90	Gomiak	178	19.04	
RF	A86	4,962,448	10/90	DeMaio et al.	700	17	
RF	A87	4,962,591	10/90	Zeller et al.	33	502	
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RF	A88	4,973,215	11/90	Karlen et al.	414	729	
RF	A89	4,982,504	01/91	Söderberg et al.	33	502	
RF	A90	4,988,981	01/91	Zimmerman et al.	345	158	
RF	A91	5,004,391	04/91	Burdea	414	6	
RF	A92	5,007,085	04/91	Greanias et al.	713	262	
RF	A93	5,007,300	04/91	Siva	74	471xY	
RF	A94	5,018,922	05/91	Yoshinada et al.	414	5	
RF	A95	5,019,761	05/28/91	Kraft	318	568.11	
RF	A96	5,024,116	06/18/91	Kraft	74	109	
RF	A97	5,038,089	08/91	Szakaly	701	23	
RF	A98	5,040,306	08/91	McMurtry et al.	33	556	
RF	A99	5,044,956	09/91	Behensky et al.	434	45	
RF	A100	5,050,608	09/91	Watanabe et al.	600	429	
RF	A101	5,053,975	10/91	Tsuchihashi et al.	700	264	
RF	A102	5,072,361	12/91	Davis et al.	700	65	
RF	A103	5,088,046	02/92	McMurtry	700	161	
RF	A104	5,088,055	02/92	Oyama	702	168	
RF	A105	5,095,303	03/92	Clark et al.	345	164	
RF	A106	5,103,404	04/92	McIntosh	318	568.22	
RF	A107	5,105,367	04/92	Tsuchihashi et al.	700	264	
RF	A108	5,115,178	05/92	Umeda	318	568.11	
RF	A109	5,116,051	05/92	Moncrief et al.	463	36	
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ATTY DOCKET NO.: MIT-075C2

APPLICANT: Massie et al.

SERIAL NO.: 10/022,114

FILING DATE: November 16, 2001 GROUP: 2123

## U.S. PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
RF	A110	5,116,180	05/92	Fung et al.	414	5	
RF	A111	5,128,671	07/92	Thomas, Jr.	341	20	
RF	A112	5,130,632	07/92	Ezawa et al.	318	568.11	
RF	A113	5,131,844	07/92	Marinaccio et al.	433	72	
RF	A114	5,132,672	07/92	Clark	345	164	
RF	A115	5,139,261	08/92	Openiano	463	34	
RF	A116	5,142,506	08/92	Edwards	367	127	
RF	A117	5,142,931	09/01/92	Menahem	74	471x1	
RF	A118	5,143,505	09/92	Burdea et al.	414	5	
RF	A119	5,148,377	09/92	McDonald	702	95	
RF	A120	5,155,423	10/92	Karlen et al.	318	568.11	
RF	A121	5,181,181	01/93	Glynn	702	141	
RF	A122	5,184,319	02/93	Kramer	703	5	
RF	A123	5,185,561	02/09/93	Good et al.	318	432	
RF	A124	5,187,874	02/93	Takahshi et al.	33	502	
RF	A125	5,189,806	03/93	McMurtry et al.	33	503	
RF	A126	5,193,963	03/93	McAfee	414	5	
RF	A127	5,198,736	03/93	Azuma et al.	318	568.1	
RF	A128	5,204,824	04/93	Fujimaki	700	161	
RF	A129	5,220,260	06/15/93	Schuler	318	561	
RF	A130	5,220,261	06/93	Kempas	318	567	
RF	A131	5,223,776	06/29/93	Radke et al.	318	568.1	
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RF	A132	5,230,623	07/93	Guthrie et al.	433	72	
RF	A133	5,239,160	08/93	Sakura et al.	219	121.82	
RF	A134	5,239,246	08/24/93	Kim	318	568.11	
RF	A135	5,251,127	10/93	Raab	606	130	
RF	A136	5,251,156	10/93	Heier et al.	702	167	
RF	A137	5,255,211	10/93	Redmond	703	6	
RF	A138	5,259,120	11/93	Chapman et al.	33	502	
RF	A139	5,264,768	11/23/93	Gregory et al.	318	561	
RF	A140	5,266,875	11/93	Slotine et al.	318	568.11	
RF	A141	5,275,565	01/94	Moncrief	434	29	
RF	A142	5,350,033	09/27/94	Kraft	180	167	
RF	A143	5,351,692	10/94	Dow et al.	600	463	
RF	A144	5,354,162	10/11/94	Burdea et al.	414	5	
RF	A145	5,379,663	01/95	Hara	74	471xy	
RF	A146	5,382,885	01/17/95	Salcudean et al.	318	568.11	
RF	A147	5,389,865	02/95	Jacobus et al.)	318	568.11	
RF	A148	5,396,265	03/07/95	Ulrich et al.	345	158	
RF	A149	5,397,323	03/95	Taylor et al.	606	130	
RF	A150	5,402,582	04/95	Raab	33	503	
RF	A151	5,414,337	05/09/95	Schuler	318	561	
RF	A152	5,417,696	05/95	Kashuba et al.	606	91	
RF	A153	5,429,140	07/04/95	Burdea et al.	600	587	
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**U.S. PATENT DOCUMENTS**

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
RF	A154	5,445,166	08/95	Taylor	128	897	
RF	A155	5,459,382	10/95	Jacobus et al.	318	568.11	
RF	A156	5,467,763	11/95	McMahon et al.	600	201	
RF	A157	5,489,830	02/96	Fernandez	318	628	
RF	A158	5,497,452	03/05/96	Shimizu et al.	345	420	
RF	A159	5,515,078	05/96	Greschler et al.	345	156	
RF	A160	5,559,412	09/24/96	Schuler	318	561	
RF	A161	5,576,727	11/96	Rosenberg et al.	345	179	
RF	A162	5,589,828	12/31/96	Armstrong	341	20	
RF	A163	5,625,576	04/97	Massie et al.	703	4	
RF	A164	5,629,594	05/13/97	Jacobus et al.	318	568.11	
RF	A165	5,724,264	03/03/98	Rosenberg et al.	702	152	
RF	A166	5,734,373	03/31/98	Rosenberg et al.	345	161	
RF	A167	5,751,289	05/12/98	Myers	345	419	
RF	A168	5,769,640	06/23/98	Jacobus et al.	434	262	
RF	A169	5,798,752	08/25/98	Buxton et al.	345	863	
RF	A170	3,919,691	11/11/75	Noll	345	419	
RF	A171	5,831,408	11/3/98	Jacobus et al.	318	568.11	
RF	A172	5,844,392	12/1/98	Peurach et al.	318	568.11	
RF	A173	5,880,714	3/9/99	Rosenberg et al.	345	156	
RF	A174	6,046,727	4/4/00	Rosenberg et al.	345	156	
RF	A175	6,104,158	8/18/00	Jacobus et al.	318	568.11	
RF	A176	6,131,097	10/10/00	Peurach et al.	707	102	

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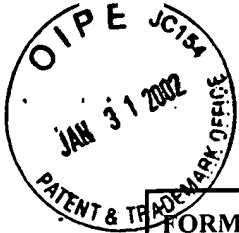
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				SERIAL NO.: 10/022,114					
				FILING DATE: November 16, 2001 GROUP: 2123					
FOREIGN PATENT DOCUMENTS									
EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG Y/N
RF	B1	WO 95/02801	01/95	PCT	—	—			Y
OTHER ART, JOURNAL ARTICLES, ETC.									
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
RF	C1	Atkinson, W. D. et al., "Computing with Feeling", COMPUT. & GRAPHICS, Vol. 2, 1977, pgs. 97-103.							
RF	C2	B. A. Marcus, B. An, and B. Eberman, "EXOS Research on Master Controllers for Robotic Devices," FIFTH ANNUAL WORKSHOP ON SPACE OPERATIONS APPLICATIONS AND RESEARCH (SOAR '91) pp. 238-245, July 1991.							
RF	C3	Barr, Alan H.; "Global and Local Deformations of Solid Primitives"; COMPUTER GRAPHICS; Vol. 18, No. 3, pgs. 21-30 (July, 1984).							
RF	C4	Bergamasco, "Design of Hand Force Feedback Systems for Glove-like Advanced Interfaces", IEEE, September 1992, pp. 286-293.							
RF	C5	Blinn, J.F., "Simulation of Wrinkled Surfaces," COMPUTER GRAPHICS, Volume 12-3, August 1978, pgs. 286-292.							
RF	C6	Brooks, F. P. et al., "Project GROPE - Haptic Displays for Scientific Visualization," COMPUTER GRAPHICS, Vol. 24, No. 4, August 1990, pgs. 177-185.							
RF	C7	Dworkin, Paul, et al., "A New Model for Efficient Dynamic," Fourth Eurographics Animation and Simulation Workshop Proceedings Eurographic Technical Report Series, ISSN 1017-4656, Sept. 4-5, 1993, pp. 135-147.							
RF	C8	H. Inoue, Y. Tsusaka and T. Fukuizumi, "Parallel Manipulator," Proceedings of 3rd Robotics Research: The Third International Symposium, Faugeras & Giralt, eds., MIT Press 1986.							
RF	C9	H. Iwata, "Pen-based Haptic Virtual Environment," Proceedings of IEEE Virtual Reality Annual International Symposium, (September 18-22, 1993, Seattle, WA), pp. 287-292.							
RF	C10	Harbur, Steve, "Kraft Telerobotics," Kraft Telerobotics, Inc. 1988, pp. 1-10.							
RF	C11	Hashimoto et al., "Dynamic Force Simulator for Force Feedback Human-Machine Interaction", IEEE, September 1993, pp. 209-215.							
RF	C12	Hirata, Yukihiro et al., "3-Dimensional Interface Device for Virtual Work Space," Proceedings of the 1992 IEEE, July 7-10, 1992, pp. 889-896.							
EXAMINER				DATE CONSIDERED					
RUSSELL FRED				3.8.04					

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OTHER ART, JOURNAL ARTICLES, ETC.		
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)	
RF	C13	Howe, Robert D. et al., "Task Performance with a Dextrous Teleoperated Hand System," Telemanipulator Technology, November 1992, Proceedings of SPIE, Vol. 1833, pp. 1-9.
RF	C14	Ishii et al., "A 3D Interface Device with Force Feedback: A Virtual Work Space for Pick-and-Place Tasks", IEEE, September 1993, pp. 331-335.
RF	C15	Kotoku, T., et al., "A Force Display Algorithm for Virtual Environments", SICE, pp. 347-355, 1992.
RF	C16	Kraft Ocean Systems, "GRIPS Underwater Manipulator System".
RF	C17	Kraft Telerobotics, Inc., "GRIPS Force Feedback Manipulator System," Kraft Telerobotics, Inc.
RF	C18	Kraft Telerobotics, Inc., "GRIPS Master/Slave Manipulator System," Kraft Telerobotics, Inc., 1988.
RF	C19	Massie, T. H., "Design of a Three Degree of Freedom Force-Reflecting Haptic Interface", Massachusetts Institute of Technology; Bachelor of Science in Electrical Science and Engineering Thesis, May, 1993, pgs. 1-38. (Not admitted as prior art)
RF	C20	McAfee, Douglas A. and Ohm, Timothy, "Teleoperator Subsystem/Telerobot Demonstrator," Force Reflecting Hand Controller Equipment Manual, Jet Propulsion Laboratory, January 1988.
RF	C21	Minsky, M. et al., "Feeling and Seeing: Issues in Force Display," COMPUTER GRAPHICS, Vol. 24, No. 2, March 1990, pgs. 235-270.
RF	C22	P. H. Sutter, J. C. Iatridis and N. V. Thakor, "Response to Reflected-Force Feedback to Fingers in Teleoperations," Proc. of the NASA Conf. on Space Telerobotics, pp. 65-74, NASA JPL, January 1989.
RF	C23	Shimoga, K. B., "A Survey of Perceptual Feedback Issues in Dextrous Telemanipulation: Part I. Finger Force Feedback" published by IEEE Neural Networks Council in IEEE Virtual Reality Annual International Symposium, held September 18-22, 1993 in Seattle, Washington, 1993, pgs. 263-270.
RF	C24	Snow, E. et al., "Compact Force-Reflecting Hand Controller," NASA Tech Brief, Vol. 15, No. 4 from Jet Propulsion Laboratory Report NPO-17851-7348, April 1991, pgs. i, 1-3, 1a-11a, 14a, 15a.
RF	C25	Tanie, K., et al., "Force Display Algorithms", 1993 IEEE International Conference on Robotics and Automation, May 2-7, 1993, Atlanta, GA, USA, 1993, pp. 661-78.
RF	C26	Terzopoulos, D. et al., "Elastically Deformable Models"; COMPUTER GRAPHICS, Vol. 21, No. 4, pgs. 205-214 (July, 1987).
RF	C27	Y. Adachi, "Touch and Trace on the Free-Form Surface of Virtual Object," Proceedings of IEEE Virtual Reality Annual International Symposium, September 18-22, 1993, Seattle WA, pgs. 162-168.
EXAMINER	RUSSELL FREED	
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OTHER ART, JOURNAL ARTICLES, ETC.			
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)		
RF	C28	Kim, W.S. et al., "A Teleoperation Training Simulator with Visual and Kinesthetic Force Virtual Reality" <u>PROCEEDINGS</u> pp 560-569, Vol. 1666, (February, 1992).	
RF	C29	Iwata, H., "Artificial Reality with Force-feedback: Development of Desktop Virtual Space with Compact Master Manipulator" <u>Computer Graphics</u> , Vol. 24, No. 4, pp. 165-170, (August, 1990).	
RF	C30	Noll, A.M., "Man-Machine Tactile Communication" <u>Polytechnic Institute of Brooklyn</u> , pp. 1-89, (June, 1971).	
RF	C31	Kilpatrick, P.J., "The Use of a Kinesthetic Supplement in an Interactive Graphics System" <u>Xerox University Microfilms</u> , pp. 1-175, (1976).	
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